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Editor :
SUTINDER SINGH

Educational Television and Higher Education

D.C. Surana*

Nothing has perhaps influenced the educational processes more than the invention of the school system, the written word, the printed word and finally the printing of pictures. These are known as the four great revolutions which seemed to have influenced the educational process the most. To these four, the 'educational technology' has been added recently as the fifth innovation which is dawning a new era on teaching and learning processes. The traditional method of chalk, talk and text is greatly facilitated by the I-level of educational techniques which serve only as teaching aids in the classroom situation. The examples are overhead, slide and film strip projectors, epidiascopes, microfiche, microfilms and the like. These are more aids to a teacher and are incapable of replacing the classroom teaching. The II-level of technology called by various names most suitable being 'electronic media' offers an alternative to the classroom teaching, the example of which are motion pictures, Radio and TV in broadcast or cassette playing modes or synchronized Audio and Slide Projecting System. Using these techniques the classroom teaching is reinforced and supplemented by a Studio teacher with facilities for verbatim repetition by replaying. At the III-level of the education technology figures the interactive computer systems either in stand or alone mode or in conjunction with communication links and display devices. The rapid advances in the field of electronics and telecommunication technologies has given rise to many more hardware products capable of gathering, processing, manipulating, storing, retrieving, disseminating, displaying and transferring information in various forms aural, visual (moving & still) and textual at any or between locations near or remote. These include productivity, methods and techniques like video text, view data, fascimile, tele-conferencing, electronic document creation and editing (word processing and computerised editing), photo composition, new imaging and reprographic techniques like electronic, printing, electronic mail, new recording, storage and retrieval systems like discs, holographic storage and double memories, new packaging and delivery concepts such as synopsis publishing, information mapping, cumulative monographs, electronic journals etc. Most of these and many more to come have great potential to be used to supplement and reinforce the system of education. It may well happen that all this gamut of educational techniques come to be known as 'Electronic learning'—one day. Some of the advanced countries have already begun exploiting these techniques to meet the challenges of information transfer and its application.

The third world countries are, however, not yet ready to introduce these new technologies for various reasons and their priorities. These countries are generally confronted with the problem generated due to numbers in population, diversities in culture, complexities of procedures, productivity and efficiency of lower order and scarcities of resources. All these factors cumulatively contribute to delays and consequently add to the waiting lines and queues for receiving any public service, distribution or utility to the chagrin of the system and the people alike. All these

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* *Head, Department of Electronics & Communication Engineering and Audio Visual Research Centre, University of Jodhpur, Jodhpur.*

phenomena are experienced by them in their day to day life be it a ticket or bank counter, ration shop or school or university admissions. It would be interesting and instructive to work out the magnitude of delays as compared to the developed countries. For example, if a third world country has its population times, its procedure *n* times more complex (i.e. steps required to obtain a service are *n* times more) and its productivity and efficiency *p* times lower than a developed country then the time required to obtain a public service would roughly be *mnp* times more allowing certain assumptions. The developed countries have cut-down their delays by computerization and the developing countries can only hope to catch up with them if they have *mnp* times faster computers. For example, if $m=n=p$ is taken as 2 then 8 times faster computers alone would level them with the developed countries. There is, therefore, no way out for underdeveloped countries but to adopt new technologies. The question therefore is not why ? But when and how ?

Eradication of illiteracy and mass education is another very important subject which should engage utmost attention of the Governments of the third world countries and particularly India. There are more than 450m illiterates in this country. In an attempt to remove this large scale illiteracy, part-time educators are engaged. A part-time adult educator on an average is paid an honorarium of atleast Rs. 1000.00 per annum to educate between 1 to 2 hours a batch of 30 people in a year. If the time target for eradication of illiteracy is set at 5 years, each instructor at the most would educate 150 people in this period. Thus 3 million part-time educators would be required for a period of 5 years and the total expenditure on honorarium alone would run to Rs. 3000.00 m per annum and perhaps an equal amount on wastage and other expenses thus entailing a total expenditure of Rs. 30,000 m (Rs. 15000 m +Rs. 15000 m) for a period of five years which is a large proportion of the total VII Plan outlay on education for the country. This illustration is merely to highlight the magnitude of the problem due to numbers. The possible alternative is to obtain the assistance of new technologies. The Radio Forum and SITE researches have concluded that the media is powerful motivator for people to learn in large groups. Is it cost-effective? To elucidate this a comparison is drawn in the following paragraph between the cost incurred on the existing method and ETV.

In terms of money an instructor is equivalent to two Black & White TV sets at a cost of Rs 5000 which can keep 60 people (30 per set) engaged in a learning activity. Since T.V. communicates orally and visually (pictorially) at the same time, it should be possible to reduce the learning time by say a factor of two (an assumption). If literacy programmes are broadcast for 8 hours in an hourly repeat mode, it would be possible to educate 240 persons per year. Thus for the same cost the technology would be able to educate roughly 2500 persons as against 150 by the instructor which is roughly 16 times more and is apparently more cost-effective. The total budget per annum would be reduced drastically to Rs. 200 m from Rs. 3000 m per annum. A word of caution is necessary at this point which is to ascertain whether the ETV is effective at all for literacy? It is not possible to answer this question categorically. An in-depth study and serious research into this aspect is therefore imperative before the technology is applied all out. But it is quite certain that the mass media would promote numeracy, literacy and education by motivating people. It can side by side champion the cause of agriculture, public health and hygiene, nutrition, population education, cattle breeding, dairy science and so on. It also bridges the space and time gap of communication between men and management by lending itself to massive information campaign, its utilization and conservation.

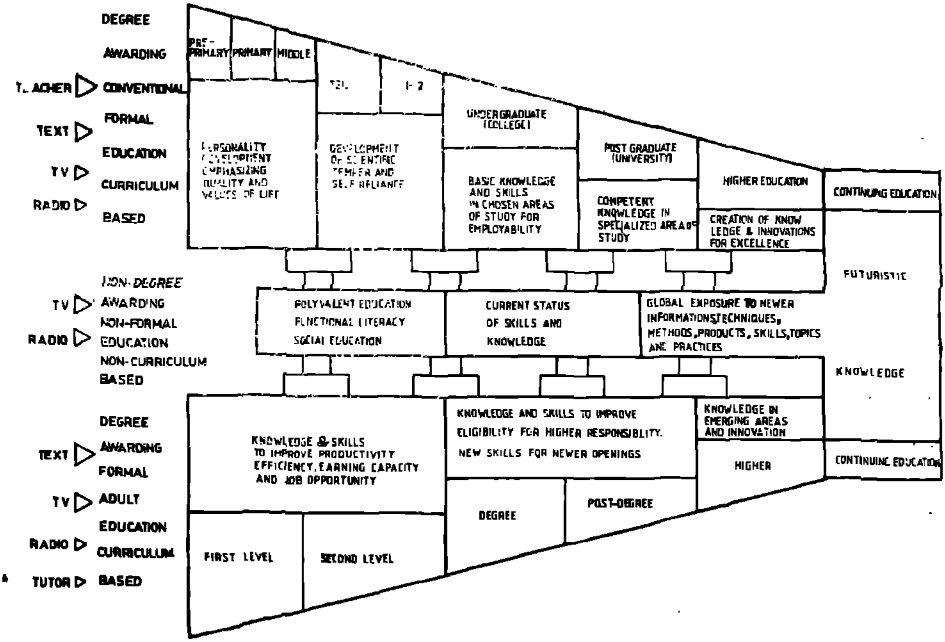
In the process of focussing attention on the need for introduction and adoption of new technologies for the third world, I have coincidently dealt with the need to use mass media TV for the formidable task of eradication of illiteracy or atleast for the promotion of literacy, but ETV is an equally promising media for the entire education process from pre-primary to life long education.

Consider now the entire spectrum of possible alternatives conceived for life long and recurrent education starting from pre-primary stage for an individual in a society. This is represented diagrammatically and has three blocks each corresponding to a particular stream having specific learning objectives to fulfil the needs and wants and offers various learning opportunities. The top-most trapezoid represents the traditional stream of formal conventional classroom teaching starting from the pre-primary level to the higher education with openings to follow it up with life long continuing education. The role of ETV is to supplement the teacher and the text. In fact, a multi-media approach is depicted in a certain order with teacher, text, TV and Radio.

Within the constraints of a curriculum the overall learning needs of the top trapezoid is influenced by the national objectives for human resources development coupled with the expectations of society and individual aspirations. In contrast to this the learning needs in the bottom trapezoid representing formal Adult Education stream, are to be based on 'marketing concept' that is to satisfy the needs and wants of the adult and mature learner, who sacrifices a few things to enter the stream with the hope and expectation to gain later. This stream encompasses concepts of open schools, open universities and correspondence courses and should be based on a curriculum which could help the learner to enhance his productivity, efficiency, capacity and capability. The aim of the learner would be to utilise the information so acquired to enhance his earning capacity or to improve chances of promotion or to open new opportunities.

Lastly the scheme of central non-formal stream is to provide an opportunity of learning for those individuals and groups who missed, dropped out or passed out of the two formal streams at some stage. The learner's desire is to be enlightened without the bindings and barriers of the formal system. Adult literacy and extension education are examples of this stream. To meet the objectives of all these three streams fully, three different time slots would be required on a separate educational or standard TV channel supported by the corresponding Radio channels. The diagram also exhibits the flexibility to leave or withdraw from any channel and enter or rejoin the same or different channel, should the need arise. The central non-formal system, as would be observed, functions as a channelizer on one side and a catalyst on the other to enter either of the two formal systems. It also offers itself as a common interphase for the continuing education, and a junction point of all the three streams. It has a built-in capability to integrate information, education enlightenment and entertainment because of its inherent unorthodox character. While both the formal streams award degrees/diplomas or certificates having state recognition, the non-formal system is a non-degree giving and non-curriculum based system.

The application of ETV in higher education needs to be emphasized. The advantages of TV are well known. It is audio and video in character that is the information or learning material is directed both serially as well as parallely thereby enhancing its impact on the learner creating a longer lasting image and impression on the mind and memory. This way the transfer of communication between the sender and receiver is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HIGHER
CONTINUING EDUCATION
FIRST LEVEL
SECOND LEVEL
DEGREE
POST-DEGREE

FIG:-STREAMS OF EDUCATION.

optimum. Other important features of ETV are the simulation of the availability of an expert teacher at all times and at all places. In addition, the demonstration of skills, experiments and field work are viewed closely by any number of people without being physically in the proximity of the demonstrator. For example, the surgical operation carried out by an expert surgeon can be viewed by students outside the theatre by CCTV, CATV or even in broadcasting TV mode. These attributes of TV are therefore of immense value in higher education for better, quicker and closer grasp. The disadvantage of TV learning is its loss of reciprocity making it a passive medium. This is alleviated to some extent by the tutor collaboration.

It would thus be most appropriate that ETV is used for holding TV seminars, TV workshops, TV conferences and T.V. colloquiums to enable participation of interested people even passively. Passive participation is better than no participation and would atleast expose people and make them aware. Similarly state of the art TV lectures would greatly contribute to the cause of higher education by improving its quality and removing obsolescence. The UGC should experiment with these ideas within the satellite time-slot available to them.

It is all very well to talk about the advantages of new technology in education but to convert it into action, needs very careful considerations or else it would instead of motivating people distract, disappoint or frustrate them. One of the most important prerequisites of ETV is production of appropriate programmes or the development of software for the three proposed alternatives. The Unesco studies into acceptability of multi-media programmes for education have advocated the need for indigenous development of software having local background, content and tone. Thus the development of software itself is a massive exercise and shall require talent, expertise and manpower of the kind which is scarce. The first effort therefore shall have to be to generate enough manpower for these new skills and trades. The UGC and the NCERT have already made moves in this direction but the effort is insufficient looking to the variety in the task.

The UGC and NCERT have also started developing indigenous software with the help of available and skilled talents, but their efforts, though commendable, appear to be just a drop in the ocean looking to the needs of the project. What is really required is the mass production of programmes without sacrificing quality and contents. The wayout is to promote production of educational video films, slides and audio cassettes as gainful industrial and competitive enterprise. The Government could set up an apex body with the responsibility to promote and finance these ventures in the state and/or private sector. The State Governments should also collaborate in this venture and share this responsibility. The apex body should also be armed with the authority to monitor, evaluate and exercise control over the quality of the programme so made on video and audio cassettes with slides. It should also undertake proper distribution of the software through appropriately chosen channels. All these programmes should be supported by proper documentation, pre and post learning and follow up material. It may, in the process also generate manpower. Only with such a set up the gigantic task of generating appropriate software can be achieved thereby exploiting fully the benefits of ETV. Utmost care should be exercised so that the clearly defined objectives of learning for the target audience are reflected in the contents of the programme. Production of educational TV films is a team activity unlike the production of textbooks and is, therefore, an extremely sensitive and critical task.

Before concluding this article it would be worthwhile to highlight the potentials of computer technology when applied for learning and teaching techniques. Essentially it is some manifestation of programmed learning as devised by Plessey and is being used in conjunction with computers in recent times. The combination of Plessey pedagogy and its application through computers has come to be known by different names such as computer based education (CBE), computer assisted or aided learning (CAL), camputer aided education etc. Computer based education is used in a wider sense and provides for computer aided facilities for organizing teaching programme, monitoring of individual student's progress in learning, testing of students and finally to feedback the quality of the course being offered by the individual teacher in addition to performing the basic functions of teaching and learning. Computer as a tool in educational technology offers two major advantages, one—it relieves the teacher of repetitive teaching tasks, and two—it provides technology for tutoring the individual student so that he can learn at his own speed and pace irrespective of the progress of other pupils in the class. The latter feature has potentialities to add another dimension to the flexibility of educational process in terms of duration of a course and reduces this duration for brighter ones. These two features in turn offer benefits like reduction in teaching time and instructional cost, increased effectiveness in teaching and learning particularly in the teaching of difficult concepts. While the computers in education have found foot-hold in the developed countries of the world as a new technology, the third world countries are introducing them experimentally with caution to ascertain its effectiveness and influence. With the availability of micro-computers and the concomitant software for education together with continuous reduction in cost and size have made the large scale introduction of computers an exciting possibility for the third world countries as well. Presently its all out introduction is being debated and may find favour in these societies to meet the large scale needs of these countries. Thus care should be taken to evaluate the computer system before they are acquired for the purpose because the least expensive systems may not be the ideal investment. What needs to be seen is the eventual cost-benefit. The education through computers is an important subject particularly with regard to its affordability and calls for an exclusive debate to visualize its impact and effects thoroughly.

CONCLUSION

The television is an excellent media for propagation of information of all sorts with immense possibilities of all kinds. It has pronounced effect on the masses and can promote thoughts, ideas and doctrines to promote national objectives with a view to bring about a change in socio-economic order and the removal of technological obsolescence. As an educational media it has exciting possibilities in the near future supporting the entire educational structure of formal classroom teaching and adult learning, non-formal education and life-long continuing education. In addition, ETV together with radio, text and tutor offers tremendous flexibilities in the educational process in the form of distance learning, open schools and open universities.

All this and more depends greatly on indigenous production of well thought out programmes corresponding to the objectives of each stream. While it should support, supplement and enrich classroom teaching for the traditional school and college system, it should serve as an alternative to the teacher in the formal adult education and non-formal system. In the higher education it should serve to provide information to keep the users abreast and ahead of times. All television programmes should be properly documented to contain the prerequisite, the message and the content. Textual support containing pre & post-learning material should be provided. Tutorial groups should be organized to alleviate the deficiency of two-way communication in television learning.

Looking to the enormity of the educational system and spectrum of learning needs, a massive effort has to be launched to produce television and radio programmes. For this purpose the appropriate strategy would be to regard it as an industrial and commercial activity open to both state and private sector. An independent apex body armed with the responsibility to promote, fund and exercise quality control needs to be established. This should be in addition to the efforts of UGC and NCERT and should work in close collaboration with these bodies. The production of radio programmes and audio-visual cassettes and slides should also come within its product range with equal emphasis. The production activity should start with very heavy emphasis on production of programmes with the specific objective of promotion of education on the lines of marketing of consumer goods. Manpower development for the purpose should also be an objective of this venture. ETV programmes both with excellent quality and enormous quantity should be the ultimate goal as only with this attainment can a country fulfil its obligation of mass education.

An agency should also be set up to provide and look after community TV sets for the rural masses. The feasibility of designing and distributing a radio receiver to receive sound only of television channel should be studied to support the community TV sets in villages. ☐

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Interdisciplinary Approach to Education

B. K. Passi*

Educational institutions design their activities of teaching, research and extension on the basis of disciplinary approach. The school students receive isolated experiences provided through disciplinary curriculum segmented into Languages, Science, Mathematics, Humanities, etc. To give an example, it is possible that the teacher of science might not relate teaching-learning processes of science teaching with that of languages and humanities. This problem gets aggravated when we find that even the support system of text-books, is also disciplinary in nature. Similarly the examinations of the students are arranged on the lines of isolated disciplines. Therefore, the child cannot develop holistic picture of knowledge on the basis of these isolated and unrelated experiences. The situation is equally bad in the colleges. The youth in the college has to follow strict and rigid disciplinary structures while selecting subjects and textbooks. Again his academic preparation of the examinations is fragmentary.

The teachers at all levels of higher education are trained through disciplinary approaches. Due to such preparations, these teachers tend to believe in the superiority of disciplinary approach. Increasing specialisation reinforces this belief. The international competition in research compels these teacher-researchers to focus upon the narrowest possible area of research in the periphery of their own disciplines. The interdisciplinary problems and methodologies are neglected or even looked down upon. Under such circumstances one can easily expect a hostile environment against interdisciplinary approach.

The organisation of faculties and departments in the universities follow disciplinary arrangements. One can easily identify sub-structures like Department of Chemistry, Department of Economics, Department of Education and so on. The appointment of teachers, budgetary allocations, the administrative arrangements and the teaching-learning environment and exclusively manned by persons who are trained through disciplinary mechanism. Eventually these arrangements strengthen in-breeding of disciplinary tendencies. The members of these rigid departmental sub-structures will not appreciate problems falling outside their given frames. Therefore, the structural arrangements in the form of isolated departments create undesirable barriers between various disciplines.

To counteract the increasing rigidity and isolation, informal and more flexible grouping of expert teams need be introduced on priority basis in the universities. These sub-structures representing informal teams of workers may continue to follow teaching and research activities till the planned projects continue. Once the planned project is completed, the volunteer teams of experts are reformulated into new teams according to the new problems and new plans. Will the universities re-examine their structural arrangements so that multi-disciplinary volunteer groups of experts can spontaneously address themselves to more realistic problems chosen by these experts groups ? This would mean that researchers and experts will not be assigned to any department on permanent basis and for all times to come.

The problems existing in the society are generally multicausal and multifaceted. The partial analysis to these problems is inadequate for designing any serious action. The problems of drop-outs in schools, unemployment of youth, imbalanced agricultural green revolution, family planning etc. are a few examples. The disciplinary preparation of graduates in higher education has failed to equip graduates with the necessary information, skills and attitudes required for the solution of such vital problems of the society. It is hypothesised that inter-disciplinary preparation of youth is not only relevant according to the social needs but it will also provide scope to develop the youth according to his potentials. Therefore, inter-disciplinary approach is more humane and democratic. This will also increase the diversity of our manpower output. Today universities prepare youth for homogeneous areas of Arts, Science, Home Science, Agriculture etc. The scope of offering inter-faculty subjects is not existing. Does it mean persons knowing Biology from science faculty, Psychology from Arts faculty, and Pedagogy from Education faculty are not required ? The realty is otherwise. There is great need of such persons in training situations existing in army, industry and schools. Similarly persons having other non-traditional and heterogeneous combination of subjects are equally important for other work situations. Of course, this does not undermine the importance of

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**Professor and Head, Department of Education, Devi Ahilya Vishwavidyalaya, Indore.*

persons having expertise within a given faculty, In other words, society requires persons having many diverse combinations of competencies. The universities therefore ought to reconsider the present "tight-jacket" teaching and research programmes.

North Eastern Hill University, Shillong has partly addressed itself to prepare interdisciplinary persons at postgraduate level. Each postgraduate student offers majority of his papers and courses from within one discipline taught by the parent department. In addition to these Intradepartmental Courses, each of these students has to offer one Extra-Departmental Course organised by the related Department other than his parent Department. For example a student of M.Sc. (Physics) will offer most of the courses from his parent discipline of Physics and also one course from Pychology as Extra-Departmental Courses. There is a possibility that students might consider this Extra-Departmental Course as an additional burden. Therefore. awareness has to be created among students that the Extra-Departmental Course is part and parcel of regular credit system. Teaching for this Extra-Departmental Course will be carried out by the concerned department. The major parent department has not to interfere in the monitoring and evaluation of this course. In order to create sufficient awareness, students ought to be provided with detailed outlines of Extra-Deparmental Courses.

Once the students start attending Extra-Departmental Courses organised and taught by new staff members from other departments there is likelihood of cropping up of new problems of common time-table. The North Eastern Hill University (NEHU) has earmarked Friday afternoon as the common time for organising Extra-Departmental Courses. Therefore, the students can easily move from one department to another and there will be no clash of any activity organised within the parent department and between the related departments offering Extra-Departmental Courses.

This practice clearly illustrates that within given vonstraints of Disciplinary Departmental Organisations, some beginning can be made. Innovative unicersities should plan such Extra-Departmental Courses with the cooperation of the administration, teachers and students. Continuous interaction between the teachers have to be arranged. As a beginning a limited programme could be planned. Can we do it ? □

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National Conference on Distance Education

The Association of Indian Universities will organise in collaboration with the Indira Gandhi National Open University and Gujarat University a National Conference on Distance Education on 9th and 10th November, 1986

Despite a phenomenal increase in educational facilities since independence, the Indian education system is not able to cope with the rising number of students who aspire for admission every year Higher education system is confronted with enormous shortages of teachers, buildings and equipment These shortages are likely to mount further because of our inability to raise matching resources This is true not only of India but of all the countries the world over

Distance education is regarded as an effective alternative to the formal system and most of the countries are making increasing use of the method of teaching at a distance This method denotes the application of multi-media approach to the entire teaching-learning process It is thought that distance education will provide solutions to the educational problems of spread of knowledge and skills as well as in raising the general level of education of the masses Introduction of correspondence courses by several universities is to be seen in this context Establishment of the Indira Gandhi National Open University and the fact that many State Governments have either established open universities or are planning to do so is only pointer to the popularity and acceptability of the concept of distance education The National Conference on Distance Education is being organised in recognition of the need for formulating appropriate policies and strategies to lend meaning and substance to the concept of distance education The focus of the Conference will be on the following themes

(a) Concept of distance education
(b) Forms of distance education
(c) Course designing and preparation
(d) Role of media in distance education
(e) Financing of distance education
(f) Student support services
(g) Evaluation methodology

Programme

The Conference will be conducted under four panels as per following programme It will conclude with a plenary session

November 9, 1986	
Session I (Inaugural)	10 30 a m - 11 30 a m
Session II	11 45 a m - 1 15 p m.
Session III	2 30 p m - 5 00 p m
November 10, 1986	
Session IV (Plenary)	10 00 a m - 12 00 noon

Participation

Delegates from various universities and other institutions of distance education (including correspondence courses) are invited to participate Governmental and private organisations in the fields of electronics, space information, data processing and satellite educational programmes may also participate Such participation can be either in terms of presenting a paper or demonstration of educational technologies, aids and other learning devices developed in India and abroad

Exhibition

It is proposed to hold an exhibition of books journals, equipment for Video TV and Computer aided instruction and demonstrations of new technologies during the Conference Entries are invited for the exhibition

Venue

The venue of the Conference and the exhibition will be the Gujarat University, Ahmedabad

Language

The official language of the Conference will be English

Further details can be had from the conveners

Conveners

B N Koul
Professor of Distance Education
Indira Gandhi National Open University
K-76, Hauz Khas
New Delhi - 110016

M M Ansari
Project Director (Research)
Association of Indian Universities
AIU House
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NATIONAL SOCIAL SCIENCE DOCUMENTATION CENTRE

The National Social Science Documentation Centre (NASSDOC) was set up in 1970 by Indian Council of Social Science Research. Like any special set up, the NASSDOC has had to adapt to the organization it serves and ICSSR's unique position made NASSDOC task a peculiar challenge which it has tried to meet with the help of the following programmes and activities.

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(ii) Providing duplicating and reprographic services.

(iii) Striving for bibliographic control over social science materials by bringing out various documents under Research Information Series. (42 titles have so far been brought out).

(iv) Providing select bibliographies on request.

(v) Providing document supply services to scholars from outside Delhi.

(vi) Providing bibliographical information about Indian publications in social science disciplines to international documentation agencies like International Committee for Social Science Information and Documentation, Paris and for International Bulletin of Bibliography on Education, published from Madrid.

(vii) Awarding study grants to scholars for working at libraries of their interest.

(viii) Providing consultancy to social science institutions in setting up documentation and information centres.

(ix) Providing facilities for staff participation in professional seminars and conferences through contributing papers as well as taking active part in their deliberations. They are also deputed to attend short duration refresher courses.

(x) Processing project proposals for consideration of ICSSR Committee on Documentation Services and Research Information for financial assistance in the field of documentation.

(xi) Entering into exchange arrangement with national and international organisations for their publications. (At present 1500 institutions are on exchange list).

(xii) Supplying ICSSR publications on payment/free and participating in book exhibitions for sales promotion and also sale of Government of India publications to research institutes.

PRESENT POSITION

Library

Working Hours : The library remains open throughout the year except three national holidays (26th January, 15th August and 2nd October). The 'Reading Unit' is open from 9.30 A.M. to 5.30 P.M. These hours may, however, vary during rush/lean period. All other Units of the NASSDOC/ILRC (Inter-Library Resources Centre) work on a five-day week basis (Monday to Friday) from 9.30 A.M. to 5.30 P.M. and close on Saturday, Sunday and other gazetted holidays.

Collection : NASSDOC has a total collection of 70,500 documents which include unpublished Ph.D. theses, research project reports and working papers. Further analysis of the collection is as under:

(i) **Periodical Literature** : The Centre has a collection of back files of about 1,00,000 volumes of social science periodicals. Current issues of most of the Indian social science periodicals are regularly received. The two documents, **ILRC Holdings List and Periodicals in SSDC : A Current List** provide complete information about the periodicals holdings in NASSDOC.

(ii) **Reference Sources** : The library has a good collection of basic reference works in social sciences including subject dictionaries, encyclopaedias, bibliographies, indexes, abstracts, etc. Specialised collection includes books on research methodology in social sciences, social indicators, and status of women. The three NASSDOC compilations, brought out under its Research Information Series, namely, **Bibliographies in SSDC, Reference Sources in SSDC** and **Social Science Research Methodology: A Bibliography** can be consulted for locating desired reference tools.

(iii) **ICSSR Publications** : The Library keeps all ICSSR priced/non-priced publications (books and periodicals, and also those for which the Council has provided publication grants). Besides ICSSR publications list, **a Guide to Books and Journals Aided/Published by ICSSR** compiled in NASSDOC provides an overall picture of ICSSR activities in the publication field.

(iv) **Theses and Research Reports:** Of special significance to Ph.D. students and other researchers in social sciences is the Library's collection of unpublished Ph.D, theses and research project reports in social sciences. Efforts are made to obtain a copy of unpublished doctoral thesis in Social Sciences accepted by Indian Universities and also foreign unpublished theses on India. So far, about 2,000 Ph.D. theses and 1,000 research project reports have been collected. To furnish access to these, two bibliographical lists entitled **Theses in SSDC and Research Project Reports in SSDC : An Annotated Bibliography**, kept updated from time to time, have been compiled.

(v) **Documents in Microform :** The following publications including journals are available on microfilm/microfiche in the library : (i) Annals of Indian Administration; (ii) Anthropological Society of Bombay Journal; (iii) Bombay Geographical Society Journal; (iv) Economic Working Papers (UK): (v) Gujarat Research Society Journal; (vi) Indian Linguistics; (vii) Psychological Abstracts; (viii) Social Action; (ix) A Bibliography of Mughal India, 1526-1707, by R.A. Sharma; (x) Caste and Tribes of Southern India, by E. Thurston and K. Ramachari. 7 vols.;, and (xi) A selective number of Ph.D. theses and research reports.

Inter-Library Resources Centre : ILRC was set up in collaboration with Jawaharlal Nehru University in 1975, inviting local libraries to deposit their non-current, infrequently used but important for research serials (i.e., Govt. reports, journals, newspapers, etc.) with this Centre at 35, Ferozeshah Road, New Delhi. 38 libraries in Delhi have so far deposited their periodicals/serials to the Centre. Sometimes back, due to lack of space, about 55,000 volumes had been shifted to the space acquired at Jawaharlal Nehru University Library, New Mehrauli Road, New Delhi. The University has recently provided a separate building in the campus for housing the material. This will facilitate accepting offers from more libraries in Delhi for depositing their material.

DOCUMENTATION PROGRAMMES

A modest beginning was made with two broad categories of programmes : (i) Programmes undertaken by the Council directly or in collaboration with selected institutions, and (ii) Programmes assisted by the Council under its Grant-in-Aid Scheme. A brief description of programmes in both the categories is given below.

ICSSR PROGRAMMES

NASSDOC Research Information Series

Union List of Social Science Periodicals : Four volumes of the Union Lists relating to periodicals currently available in Andhra Pradesh, Bombay, Delhi and Karnataka libraries were brought out in 1971-72. The Delhi list has been updated in 1978, 1982 and 1985. The latest one records the availability of 2,909 periodicals titles in 30 libraries in Delhi during 1985. The list will now be continuously compiled through microprocessor, and kept updated on floppies.

Union Catalogue of Social Science Serials : The compilation of the Union Catalogue was the first major project undertaken on April 1, 1970 and formally completed on March 31, 1976. 32 volumes giving location of about 31,125 serials in 550 libraries in the 17 States and two Union Territories with a separate volume on National Library, Calcutta have been published. The union catalogue helps to locate a recognised volume of social science periodical/serial if it is available in one or the other participating library. It also helps these libraries to share their serial resources with one another for the benefit of their clientele. The union catalogue, by its very nature, requires revision from time to time to provide information about the current status of serials in our libraries. In some cases, part of these may have been weeded out by certain libraries. Libraries, in general, will have large holdings in the years to come than what they have now. Unique holdings of some titles may also be discovered in presently lesser known libraries. The revision of the union catalogue is not only necessary but imperative if the time of social scientists is to be saved. It has, therefore, been decided to take up this work on a regular basis and make it a core activity and continuing programme of the NASSDOC.

Union Catalogue of Newspapers in Delhi Libraries : To update data regarding availability of backfiles of newspapers in Delhi Libraries, earlier which formed part of Union Catalogue of Social Sciences Periodicals—Delhi Libraries, a separate fascicule with the above mentioned title was brought out in mimeo form in 1978, and subsequently revised in 1983. The latest catalogue covers 252 newspaper titles available in 36 libraries and newspaper offices.

Directory of Social Science Research Institutions and Directory of Professional Organizations in India : NASSDOC has updated the two directories originally published in 1971 and the information is available on cards for reference.

Mahatma Gandhi Bibliography : The first volume in the series **Mohandas Karamchand Gandhi : A Bibliography** devoted to monographs in English was released on October 27, 1974. This has been followed by volumes covering monographs in Hindi, Sanskrit and Urdu. The manuscript of Bengali fascicule has been released for printing. The remaining volumes are at various stages of compilation.

Retrospective Cumulative Index of Indian Social Science Periodicals: With the Union Catalogue Project behind it, the NASSDOC planned to prepare a retrospective cumulative index of Indian social science periodicals right from their respective first volume. The Retrospective Index Project was started from April 1, 1976. NASSDOC identified 240 Periodicals for the project, and decided 1970 as the cut-off year. So far, work relating to indexing of journals in Education, Psychology, Anthropology and Sociology has been completed. When the project is completed, it will offer bibliographical control of periodical literature published over the past hundred years or so, of potential utility to social scientists. The Index is planned to be maintained initially on cards which can be consulted by scholars even while the work is in progress. It may be printed serially or computerized later on. The initial experience of bringing out a volume of **Indian Education Index** under series has been greatly appreciated, which is reflected in the demand for such work. This is, therefore, planned to be a long term continuing service under which a series of volumes are proposed to be brought out. The volume next in the series **Index to Indian Periodicals : Sociology and Psychology** (1915-1970) is under print and will be released very soon.

On completion, the Retrospective Cumulative Index will have the following advantages :

(1) The Index will provide reasonable bibliographic control of periodical literature published in this country during approximately the last 130 years.

(2) The Union Catalogue volumes will provide locations in the country of needed volume (s) of any periodical for quick and easy access.

(3) Inter-Library Resources Centre will try to provide access to these volumes or supply copies of required articles at reasonable cost.

Area Studies Bibliographies : Started during 1979, the project of Area Studies Bibliographies aimed at bringing together all Social Science material of research value pertaining to the different States and Union Territories of India. Under this project, it is envisaged to bring out series of bibliographies which will cover material in social sciences available in any form and language exclusively related to the area concerned.

Under the supervision of a Project Director in each State/Region, the compilation work has been completed in Andaman & Nicobar Islands, Goa, Daman & Dieu, Madhya Pradesh, Punjab, Haryana & Himachal Pradesh. Rajasthan. Tamil Nadu, U.P. (Eastern Region) and is in progress in the remaining States and Union Territories. About 10,000 titles in English and Indian regional languages have been collected under the Area Study Project.

Language Bibliographies: The project is wider in scope and seeks to cover research materials in all disciplines in social sciences in Indian regional languages. The compilation work of bibliographies in Gujarati, Hindi, Kannada and Oriya is in progress. The bibliographical data of about 6,000 references in Hindi, 2,000 in Gujarati and 300 each in Oriya and Kannada languages is in hand.

ICSSR ASSISTED PROJECTS

The second category of programmes assisted by the ICSSR with a grant-in-aid relates to compilation of Indexes and bibliographics.

Publication Assistance

Publication of good reference works has also been promoted by bulk purchase of copies: (1) **Civil Disobedience and Indian Tradition,** (2) **A Guide to Reference Material on India,** (3) **Hindi Sandharbh,** (4) **Index India,** (5) **Index to Calcutta Review,** (6) **Indian Behavioural Science Abstracts,** (7) **Indian Education Index (1948-1978),** (8) **Indian Political Movement (1919-1971),** (9) **Kesari Centenary Index,** and (10) **Theses on the Indian Subcontinent (1877-71)** are some examples in the category.

Financial Assistance to Libraries/ Documentation Centres

Grant-in-aid has also been provided to the Indian Council of World Affairs, New Delhi, towards the maintenance of the library including subscription of journals since 1980-81 and to the Indian Renaissance Institute, Dehra Dun for the upkeep of M.N. Roy Archives.

FRESH INITIATIVES

(i) Automation of Services

Beginning has been made with the acquisition of micro-processor. The end objective is to have computerised data base of research material (books, periodicals, research reports, theses, working papers) in social science disciplines available in Delhi Libraries.

(ii) **Research Projects Data Base**

Setting up a data base of research projects in social sciences, completed and in progress, to avoid publication and judicious utilisation of resources.

(iii) **Programmes Activation**

Taking up vigorously again the ICSSR approved programmes presently under inanimation or suspension, like Retrospective Indexing Programme, Union Catalogue Programme, Inter-Library Resources Centre, Sale of Govt. of India Documents, etc.

(iv) **SDI Service**

Initiating compilation of interest profiles of scholars so as to provide Selective Dissemination of Information Service.

(v) **Resources Sharing**

Initiating a meeting of subject experts and professionals (in the field of Economics, Political Science to begin with) to find out ways for maximum utilisation of resources available and minimising duplication of services and material like documentation services and purchase of costly foreign books and journals.

(vi) **Micro-filming of Research Material**

Micro-filming of theses, project reports and journals is contemplated to cope with space shortage and preservation problems.

(vii) **Research Facilities to Scholars**

Providing quick document delivery services through adding more photo copiers and one micro-film reader-cum-printers.

(viii) **Training Programmes**

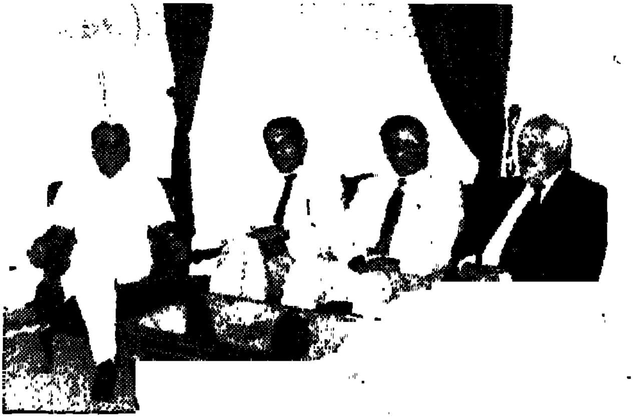
Undertaking library courses leading to Associateship in Library and Information Studies in Social Sciences and also short term courses on various topics of current interest.

FUTURE PROGRAMMES

1. Establishment of a microfilming unit.
2. A national information grid has been on the planning board for some time. The system is expected to link centres of excellence (in social sciences) of the country and make expeditious service to the seeker of information a *sine qua non* of coordinated cooperation among the constituents. ☐

Mutual Recognition of Awards

A protocol for mutual recognition of various awards at secondary and post secondary levels between India and Egypt was signed when a three-member Indian delegation comprising Dr. Jagdish Narain, Secretary AIU; Dr. D.C. Biswas, Joint Educational Adviser (T) and Shri S.N. Chakravarty, Dy. Educational Adviser (T) in the Ministry of Human Resource Development visited the Arab Republic of Egypt (ARE). The visit was sponsored by the Department of Education, Ministry of Human Resource Development under Indo-Egypt Cultural Exchange Programme.



Indian Cultural Delegation with Mr. Fawzi Abdel Zahir, First Under Secretary, Ministry of Higher Education, Arab Republic of Egypt.

Rs.1.8 Crore FRG Aid for Anna University

The Anna University, Madras, would receive a financial assistance of Rs. 1.8 crores (DM 3 millions) from the Federal Republic of Germany during 1986-87 for development of its educational and research facilities. This was finalised at the Indo-FRG bilateral negotiations held recently. This is in addition to Rs. 1.5 crores sanctioned during 1985-86 for the development of its Institute of Remote Sensing.

Dr. V.C. Kulandaiswamy, Vice-Chancellor of Anna University said that this amount will be utilized for the development of educational and research facilities in the areas of (i) Instrument Technology; (ii) Industrial Engineering, and (iii) Electronics and Communication Engineering at the MIT. Chromepet and College of Engineering, Guindy respectively.

Under the agreement, the FRG will provide equipment which will be the major component of assistance and also make available the services of experts in certain identified specialities. The project also provides for training of faculty members in these three areas in technical universities and research institutions in FRG.

Centre for Advanced Studies in Urdu

The Academic Council of the Punjabi University which met on September 5 in Patiala approved, in principle, the recommendations of the University Planning Board for setting up the Depatrment of Bio-Chemistry and start a four-year course of B. Tech. in Computer Sciences from the 1987-88 session. It also approved to establish a Centre of Advanced Studies in Urdu at Malerkotla and start a three-year course of B.Sc. in Home Science and evening classes of M.A. in Dance at Government College for Women, Patiala.

The Council also gave its approval to allow Punjabi as a medium of instruction and examination for the M.Phil. course in Education. It also agreed to extend recognition to the Centre for Research in Rural and Industrial Development, Chandigarh for research in the faculty of Arts and Social Sciences.

Anna University Staff Development Programmes

The Anna University, Madras, has evolved various schemes to train the administrative staff at different levels ranging from Deputy Registrars to the Junior Assistants. As a first step, a training programme on Office Management was conducted for all the Superintendents of the University in the year 1983. Subsequently, the Deputy Registrars and Assistant Registrars were sponsored to training programmes conducted by organisations like Anna Institute of Management. The training programme on Office Procedure is being repeatedly organised by University for all the Assistants, Junior Assistants, Store-Keepers, Stenographers and Typists.

Adult/Continuing Deptt. for Manipur Varsity

A Department of Adult/Continuing Education and Extension has recently been opened at the Manipur University. Inaugurating the Department, the State Finance Minister, Mr. L. Lalit, said that the decision of the university to start this Centre would prove to be beneficial for the uneducated masses of the region and hoped that the university would become a coordinated body for implementation of the adult education programme. Speaking on the occasion, the Vice-Chancellor of the university, Prof. K.J. Mahale, said that the NSS group would be actively involved for improvement of this programme.

UNIVERSITY NEWS

A Special Number on

DISTANCE EDUCATION

8 November 1986 issue of University News will be a Special Number to mark the National Conference on Distance Education being organised on the occasion of the 61st Annual Meeting of the Association of Indian Universities at Gujarat University, Ahmedabad from 9-11 November, 1986. Contributions in the form of articles/reports/reviews are solicited on any one of the following aspects of Distance Education :

Concepts of Distance Education; Forms of Distance Education; Course Designing and Preparation; Role of Media in Distance Education; Economics of Distance Education; Student Support Services; Evaluation Methodology; and Case Studies, etc.

Articles of 2000-2500 words should be typewritten on one side of quarto sized paper in double spacing. Only original articles that have not been published elsewhere need be submitted. Contributions should reach the Editor latest by 30 September, 1986.

The University Grants Commission (UGC) is reported to have agreed to provide hundred per cent grant for the core and supporting staff of this department for a period of ten years.

New Courses at Madras University

The Madras University proposes to introduce new courses of M.Sc. in Bio-Chemical Genetics, Bachelor of Labour Management and Master of Labour Management. The Academic Council of the University is understood to have approved the detailed regulations and syllabi for institution of these courses.

A new postgraduate course in Cartography (map-drawing) is also proposed to be introduced. According to Dr. B. B. Sundaresan, Vice-Chancellor of the University, this was being done at the instance of the Indian Space Research Organisation and the National Remote Sensing Agency. He said that the UGC had already selected the Geography Department of the university for collaboration with the USSR for 10 years in multicultural areas pertaining to the subject.

NCERT Awards Silver Jubilee Fellowships

To mark its Silver Jubilee, the National Council of Educational Research and Training (NCERT) has chosen 19 eminent educationists, including Mr. P. V. Narasimha Rao, Union Minister of Human Resource Development and Mr. Amadou Mahtar M'bow, Director-General, UNESCO, for the award of national fellowship. The educationists to be conferred the fellowship are: Prof. V.K.R.V Rao, Dr. K.L. Shrimali, Prof. D.P. Chattopadhyaya, Prof. D.S. Kothari, Dr. Manmohan Singh, Prof. M.G.K. Menon, Prof. Raja Ramanna, Prof. Yash Pal, Prof. C.N.R. Rao, Prof. V.V. John, Dr. P.N. Kirpal, Prof. S.V. Chaiya, Prof. Rais Ahmed, Prof. Shib K. Mitra, Prof. (Mrs) Chitra Naik, Prof. (Mrs) Rajamal P. Devadas and Mr A.R. Dawood.

News from Agril. Varsities

Plea for Financial Autonomy

The Indian Agricultural Universities Association which met at Srinagar in July set up a 5-member Committee headed by Dr. Sukhdev Singh, VC, Punjab Agricultural University, to draft a new Agricultural Education Policy. Other members of the Committee were : Dr. N.G.P. Rao, VC, Marathwada Agriculture University, Mr. O. S. Misra, Registrar, G.B. Pant University of Agriculture and Technology, Pantnagar, Dr. J. Subhiah, Dean, Agriculture, Andhra Pradesh Agricultural University, and Dr U.C. Upadhyay, Assistant Director-General (Education), ICAR.

In a draft submitted to the Government, the Committee has said that financial autonomy should be granted to agricultural universites. It observed that the effectiveness of universities as an instrument of development depends, among other things, on the extent of their financial autonomy.

The Committee has also recommended that a separate budget cell should be set up by the State Government for agricultural universities. Its level of funding should be at least 10 to 20 per cent of the State budget for agriculture, as has been recommended by the National Commission on Agriculture and endosred by the Randhawa Committee. The principle of block grants should be followed by the State Governments for releasing grants to universities with a provision for an annual increase of 5 to 10 per cent as proposed by the Randhawa Committee. Agricultural universities should also be allowed to raise additional resources, including income from consultancy service contracts from within and outside the country.

The Committee has further said that yet another effective mechanism which can be adopted to promote financial autonomy for agricultural universities is the creation of endowments.

The Committee has emphasised that higher agricultural education has to be connected with the training of qualified men and women who occupy leading positions in the development of scientific agriculture and shaping agricultural policies. The education should, however, not be limited to teaching and training functions.

It has opposed the establishment of five rural universities and five other rural institutions at a cost of Rs. 60 crores over the next four years as envisaged in the national education policy.

It has felt that the scope of functioning of the existing network of agricultural universities should be widened instead.

The Committee observed that by successfully demonstrating their worth on the agricultural front, these universities have earned a high degree of credibility and strong identification from people in rural areas within their jurisdiction. This aspect further lends support to the argument of investing scarce resources in expanding the functional scope of the existing agricultural universities, rather than setting up new and parallel institutions.

It has recommended that the total membership of the boards of management of various agricultural universities should not exceed 15.

The Committee has also suggested that all agricultural universities should switch over to the semester system of education.

Birsa Varsity Plan for Tribal Uplift

The Birsa Agricultural University at Ranchi is reported to have formulated a number of development projects for the economic benefits of tribals and other weaker sections of the Chotanagpur region and Santhal Parganas. Such programmes would be implemented in the near future through agricultural education and research with the cooperation of 48 active voluntary organisations of the area.

The agricultural education would include expansion and development in the fileds of agriculture, veterinary science and animal husbandry and forestry and strengthening of the existing key departments of the faculty of agriculture.

It would also include selective expansion of some annual units of the faculty or veterinary science and strengthening the infrastructure for research, better animal production and greater health care.

Besides, the agricultural education would aim at strengthening and proper organisation of the departments in the faculty of forestry to relate its activities to the present day needs of afforestation and environment.

For conducting research, better infrastructure would be provided to cover different fields of crop science, veterinary, animal care and forestry. For that purpose, three research stations under national agricultural research programme would be established at Darisal (Ghatshila), Chianki (Daltonganj) and Dumka (Santhal Parganas).

The research stations would be for different technology in different agro-climatic zone. Besides, crop improvement centres with ICAR assistance would be set up.

Speical attention would be paid to dry land farming, soil conservation and water management and research would be conducted to improve the quality of fruits and vegetables.

Under the programme for extension education various training courses would be undertaken in the fields of modern agricultural production and forest management for educating farmers in the adoption of new technologies.

The scheme would include coverage of more farm families under the 'lab-to-land' programme for adoption of suitable technology to boost livestock production.

An Improved Iron Plough

An improved iron plough has been developed by the Department of Farm Machinery, Tamil Nadu Agricultural University (TNAU), Coimbatore. It is made of mild steel except the pole shaft. It has longer life than the country plough. Besides, the improved plough has the following advantages: (i) Share can be pushed forward as and when share point goes off; (ii) The share is provided below the body of the plough which improves soil scouring; (iii) Pole shaft angle can be changed easily in the filed; (iv) It is provided with mould board as optional attachment for soil inversion; (v) Vertical suction has been incorporated in the plough to ensure proper depth of ploughing; (vi) Height of handle can be altered; (vii) Disassembling, assembling and transportation of the plough are easy.

Field capacity of the improved iron plough is 0.06 ha/hr. Draft and power requirement of the plough were 66.35 kg and 0.54 hp respectively. The plough costs about Rs. 400 and the operational cost is Rs. 29.63/ha.

We Congratulate...

Sri Saiyid Shumshad Ahmad who has taken over as Vice-Chancellor of the C.S. Azad University of Agriculture & Technology, Kanpur with effect from September 9, 1986.

Inter-Varsity Youth Festivals 1986

Final dates and venues:

Zone	Venue	Dates
SOUTH		
Andhra University	**Waltair**	**October 2-5, 1986**
EAST		
Gauhati University	**Guwahati**	**October 18-21, 1986**
WEST		
University of Rajasthan	**Jaipur**	**October 27-30, 1986**
NORTH		
Agra University	**Agra**	**November 3-6, 1986**

SPORTS NEWS

SNIPES Board Reconstituted

On expiry of the term of the Board of Governors of the Society for the National Institutes of Physical Education and Sports (SNIPES), the Ministry of Human Resource Development, Government of India have reconstituted the Board of Governors of the Society. Shri P.V. Narasimha Rao, Minister of Human Resource Development and Smt. Margaret Alva, Minister of State for Youth Affairs and Sports have been named as Chairman and Vice-Chairman of the Board respectively. Other members of the reconstituted SNIPES Board are as follows :

Representative of the Government of India (3) Ex-Officio

1. Joint Secretary in-charge of Youth Affairs & Sports.
2. Joint Secretary in the Department of Education.
3. Addl. Secretary (Expenditure), Ministry of Finance.

Representatives of State Governments (2)

4. Government of Kerala (Southern Region).
5. Government of U.P. (Northern Region).

Expert in Physical Education (2)

6. Dr. P.L. Malhotra, Director, NCERT, New Delhi.
7. Prof. Karan Singh, Head, Department of Physical Education, Banaras Hindu University.

Sports Promoters (4)

8. Secretary-General of Indian Olympic Association.
9. Director-General, Sports Authority of India.
10. Dr. Jagdish Narain, Secretary, Association of Indian Universities.
11. Shri Jaideep Singh Baria, M.P., President, Amateur Athletics Federation of India.

Experts in Yoga (1)

12. Shri O.P. Tiwari, Kaivalayadham Shreeman Madhav Yoga Mandir Samiti, Lonavala, Pune.

Outstanding Sports Persons (2)

13. Kumari Sushma Sarolkar, (Kho Kho).
14. Shri Anand Amritraj (Tennis).

Dean, Lakshmibai National College of Physical Education, Gwalior (Ex-officio)

15. Dr. N.N. Mall, Dean, Lakshmibai National College of Physical Education, Gwalior.

Member-Secretary

16. Dr. R.L. Anand (Ex-Officio), Director General, Netaji Subhash National Institute of Sports, Patiala.

A representative of each of the State Governments where Netaji Subhash National Institute of Sports and Lakshmibai National College of Physical Education and/or their regional wings are located will be permanent invitees to the SNIPES meetings.

The members shall hold office for a period of 3 years with effect from 1st September, 1986.

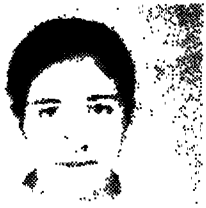
University Athletes for Asian Games

Two university athletes, Kamalpreet Singh and Gurmeet Kaur (GNDU) have been selected as members of the National Athletic Team for the X Asian Games being held at Seoul (South Korea) from 20.9.86 to 5.10.86.

Kamalpreet Singh—a student of M.A. Part I at G.N.D. University, excelled in Discus Throw at the 4-nation International Meet held at Delhi in August 1986 with the recorded performance of 52.92 mtrs. Attended AIU training camps for the World University Games 1985, Kobe (Japan). Recorded 51.48 mtrs. at the Inter-University Athletic Meet 1985 at Pantnagar. Represented Indian Universities Athletic Team in the All India Open Athletic Meet 1986 at Delhi where he recorded 50.20 mtrs. A promising hopeful to watch.

Kamalpreet Singh

Gurmeet Kaur—a B.A. (Final) student at G.N.D. University, excelled in shotput, at the All India Athletic Meet 1986 at Delhi where she recorded her best performance of 13.40 mtrs. A probable for the AIU training camps for the Kobe World University Games she qualified for the Seoul Asian Games in terms of the 6th position performance of the IX Asian Games. An athlete full of promise.



Gurmeet Kaur

CALENDAR OF EVENTS

Proposed Dates of the Event	Title	Objective	Name of the Organising Department	Name of the Organising Secretary/Officer to be contacted
October 1-4, 1986	*Third National* Conference on Women's Studies	To promote the development of Women's Studies in India by providing a forum for interaction amongst individuals, institutions and organisations engaged in teaching, research or action for women's development.	Indian Association for Women's Studies, New Delhi in collaboration with Panjab University, Chandigarh	Dr. Lucy Jacob, General Secretary, IAWS, L-3-D, University Campus, Jaipur
October 5-7 1986	**International Seminar on Gandhi and Contemporary Ideologies regarding Freedom, Peace and Equality.**	**To evaluate the Contemporary Ideologies regarding Freedom, Peace and Equality in the context of Gandhiji's Contribution.**	**Institute of Gandhian Thought and Peace Studies, Allahabad University in collaboration with the Indian Society for Gandhian Studies.**	**Dr. J.S. Mathur, Director and Dr. O.N. Srivastava, Associate Director, Gandhi Bhawan, Allahabad University, Allahabad.**
November 9-10, 1986	**National Conference on Distance Education**	**Topics proposed to be covered are: (i) Concept of Distance Education; (ii) Forms of Distance Education; (iii) Course Designing and Preparations; (iv) Role of Media in Distance Education; (v) Financing of Distance Education; (vi) Student Support Services; (vii) Evaluation Methodology.**	**Association of Indian Universities, New Delhi; Indira Gandhi National Open University, New Delhi; and Gujarat University, Ahmedabad**	**Prof. B. N. Koul, Indira Gandhi National Open University, K-76, Hauz Khas, New Delhi.** **Mr. M.M. Ansari, Project Director (Research), Association of Indian Universities, 16 Kotla Marg, New Delhi**
November 15-17, 1986	Seminar on Problems, Aspects and Areas of Research in Music	To identify the latest trends in the research in music.	Department of Musicology and Aesthetics, Indira Kala Sangit Vishwavidyalaya, Khairagarh.	Dr. (Smt) Subhdra Chowdhary, Head, Department of Music, Indira Kala Sangit Vishwavidyalaya, Khairagarh.
Nov. 23-Dec. 13, 1986	All India Short-Term Institute on Polymer Technology	To make an awareness of the recent developments in polymer science/technology to Chemistry teachers in universities and colleges	Department of Polymer Science and Rubber Technology, Cochin University of Science and Technology, Cochin.	Prof. D. Joseph Francis, Director of the Short-term Institute, C/o Department of Polymer Science and Rubber Technology, Cochin University of Science and Technology, Cochin.
December 12-14, 1986	All India Seminar on Psychology, Sociology, Sports and Allied Sciences.	To acquaint the teachers and Professional personnel in Physical Education, Psychology and Sociology with the latest trends of research in Sports and Allied Sciences.	Degree College of Physical Education, Amravati.	Dr. V.D. Bapat, Organising Secretary, C/o Degree College of Physical Education, Amravati.
December 14-21, 1986	All India Workshop-cum-Seminar on improvement in teaching of English.	To evaluate the method of English language teaching with special reference to curriculum development	Shree J.B. Thackker Commerce College, Bhuj	Prof. V.J. Jadeja, Head, Deptt. of English, Shree J.B. Thackker Commerce College, Bhuj.
December 15-17, 1986	Indian Geotechnical Conference—1986	Designed to seek a consensus on questions of current significance in geotechnical engineering relevant to the Indian context.	Indian Geotechnical Society—Delhi Chapter	Prof. Shashi K. Gulhati, Organising Secretary, IGC-86, Civil Engineering Department, Indian Institute of Technology, New Delhi.

AIU Library & Documentation Services

One of the important functions of the Association of Indian Universities is to act as a clearing house of information on higher education in the country. Towards this end the AIU Library is engaged in collection building and developing instruments for the dissemination of research information. Over the years a valuable collection of books and documents on different aspects of higher education has been acquired.

The Library has also developed Bibliography of Doctoral Dissertations as an effective tool in the dissemination of research information. Retrospective bibliographies covering the period 1857-1970 and 1970-75 were the first to appear. Effective 1975, however, the bibliography is issued annually in two volumes. One volume deals with Natural and Applied Sciences while the other records doctoral degrees awarded in Social Sciences and the Humanities. In addition to the normal bibliographical details like the name of the Research Scholar, the title of the thesis, years of registration for and award of the degree, and the name of the University accepting the thesis for award of a doctoral degree, the bibliography also gives name and complete address of the supervising teacher and an availability note that seeks to inform whether a copy of the dissertation is available for consultation and use in the University Library/Department or Registrar's Office.

The columns 'Theses of the Month' and 'Research in Progress' are intended to cut out the time lag between the receipt of information and its inclusion in bibliography. Such Universities as are not sending us regular information in respect of Doctoral Theses accepted and research scholars enrolled are welcome to make use of these columns.

The Library is open from 9.30 a.m. to 5.30 p.m. Monday through Friday.

CURRENT DOCUMENTATION IN EDUCATION

A list of select articles culled from periodicals received in AIU Library during August, 1986.

EDUCATIONAL PHILOSOPHY

Graham, Gordon. The use and value of university education. *Hr. Edn Rev* 18(3) 1986, 7-16.

EDUCATIONAL PSYCHOLOGY

Patnaik, S.P. Teacher competence and pupil performance: The effect of self-concept, anxiety and motivation. *J. Indian Edn* 12(1), 1986, 16-21.

Sehuinger, Wolfgang. Learning: Is it senseless and boring ? *Education* 33, 1986, 24-47.

EDUCATIONAL SOCIOLOGY

Kielmansegg, Peter Graf. Is there an academic ethic? *Minerva* 23(4) 1985, 504-7.

Krishna Kumar. Textbooks and educational culture. *Eco Pol Weekly* 21(30), 1986, 1309-11.

Segerstedt, Torgny. On certain problems in the ethical obligations of university teachers. *Minerva* 23(1), 1985, 62-74.

EDUCATIONAL PLANNING

Anand Sarup. Implementing new education policy. *Mainstream* 24(42), 1986, 7-8, 12.

NAVODAYA VIDYALAYA scheme. *Mainstream* 24(40), 1986, 20-22.

EDUCATIONAL ADMINISTRATION

ACADEMIC FREEDOM and permanent tenure in academic appointments. *Minerva* 23(1), 1985, 96-150.

Estey, Marten. Faculty grievance procedures outside collective bargaining: The experience at AAU campuses. *Academe* 72(3), 1986, 6-15.

Lindenberg, Karene. The grievance process in a collective bargaining setting. *Academe* 72(3), 1986, 20-24.

Mucha, Janusz. University legislation and the decline of academic autonomy in Poland. *Minerva* 23(3), 1985, 362-82.

CURRICULUM

Lob, Reinhold E. A case of action-oriented non-formal environment education. *Prospects* 15(4), 1985, 597-605.

Oommen, M.A. Economics teaching in Indian universities. *Mainstream* 24(48), 1986, 15-9.

Pritam Singh. Evaluating a curriculum: The quality control approach. *J Indian Edn* 12(1), 1986, 9-15.

TEACHERS & TEACHING

Brown, George and Atkins, Madeleine. Academic staff training in British universities: Results of a national survey. *Studies Hr Edn* 11(1), 1986, 29-42.

Weston, Cynthia and Cranton, P.A. Selecting instructional strategies. *J Hr Edn* 57(3), 1986, 259-88.

EDUCATIONAL RESEARCH

Allender, Jerome, S. Educational Research: A personal and social process. *Rev Ednl Res* 56(2), 1986, 173-93.

EVALUATION

Fuchs, Douglas and Fuchs, Lynn S. Test procedure bias: A meta-analysis of examiner familiarity effects. *Rev Ednl Res* 56(2), 1986, 243-62.

Harris, Deborah J. A comparison of two answer sheet formats. *Ednl Psy Measurement* 46(2), 1986, 475-8.

ECONOMICS OF EDUCATION

Marris, Robin. Higher education and the mixed economy: The concept of competition. *Studies Hr Edn* 11(2), 1986, 131-54.

Mingat, Alain and Tan, Jee-Peng. Who profits from the public funding of education: A comparison of world regions. *Comp Edn Rev* 30(2), 1986, 260-70.

Reuterberg, Sven-Eric. Study assistance and degree completion in Swedish Higher Education. *Studies Hr Edn* 11 (2), 1986, 155-71.

Stratmann, Karlwilhelm. Unemployment as a criticism of vocational education. *Education* (33), 1986, 48-62.

SCIENCE EDUCATION

Lockard, J. David. Science and technology education: Developments under review. *Prospects* 15(4), 1985, 523-33.

Udgaonkar, B.M. Role of education in scientific research. *Mainstream* 24(40), 1986, 13-9.

PROFESSIONAL EDUCATION

Engel, C.E. and Clarke, R.M. Professional education for capability and change. *Hr Edn Rev* 18(3), 1986, 27-35.

Sharma, Santosh. Evaluation in professional courses. *J Indian Edn* 12(1), 1986, 49-51.

COMPARATIVE EDUCATION & COUNTRY STUDIES

Balachander, K.K. Higher education in India: Quest for equality and equity. *Mainstream* 24(48), 1986, 11-4.

Ben-David, Joseph. Universities in Israel: Dilemmas of growth, diversification and administration. *Studies Hr Edn* 11(2), 1986, 105-30.

Flather, Paul. India's open season. *THES* (716), 25 July '86, 10.

Hunter, Howard O. Academic self-government in the United States. *Minerva* 23(1), 1985, 1: 28.

Kak, Subhash. The roots of science in India. *India Intl Centre Qrly* 13(2), 1986, 181-96.

Klausner, Samuel Z. A professor's eye view of the Egyptian academy. *J Hr Edn* 57(4), 1986, 345-69.

Kolinsky, Martin. The growth of Nigerian Universities, 1948-1980: The British share. *Minerva* 23(1), 1985, 29-61.

Lungu, Gatian F. Elites, incrementalism and educational policy-making in post-independence Zambia. *Comp Edn* 21(3), 1985, 287-96.

Mitter, Wolfgang. Continuity and change: A basic question for German education. *Education* 33, 186, 7-23.

Mosha, Herme J. The role of African Universities in national development: A critical analysis. *Comp Edn* 22(2), 1986, 93-109.

Teese, Richard. Private schools in France: Evolution of a system. *Comp Edn Rev* 30(2), 1986, 247-59.

Tight, Malcolm. The provision of part-time first degree courses in the United Kingdom. *Studies Hr Edn* 11(2), 1986, 173-88.

THESES OF THE MONTH

A List of Doctoral Theses Accepted by Indian Universities

BIOLOGICAL SCIENCES

Anthropology

1. Gupta, Shashi Prabha. *A biodemographic study of the rajputs and the jats of rural Haryana.* Delhi.

2. Neeti Bala. *A study of fertility among the vaish women of Aligarh, Uttar Pradesh.* Delhi.

3. Pachoury, Priti. *Anthropogenetic study of sanadhya brahmins of Mahakoshal.* Ravishankar.

4. Sharma, Neelam. *Differential patterns of craniofacial growth and body size: A factor analysis of Punjabi girls.* Delhi.

5. Suri, Renu. *Physical anthropology of the Angami Naga: A tribe of North-East India.* Gauhati.

Microbiology

1. Gopalan, G. *Regulation of mitochondriogenesis in yeast: Effect of oxygenous hemin on mitochondriogenesis during glucose repression depression in Saccharomyces cerevisiae.* Madurai.

2. Patel, Kishoriben Manubhai. *Hydrocarbon utilization by Pseudomonas fluorescens.* Patel.

Biophysics

1. Latha, L. *Biophysical studies on seed germination.* Osmania.

Biochemistry

1. Ayene, S. Iraimoudi. *Investigation into the mechanisms of the radioprotective effect of MPG, cysteamine, WR-2721 and thioproline on the biological system.* JNU.

2. Bezbaruah, Rajib Lochan. *Studies on the factors affecting the production of intracellular and extracellular amylase, by Bacillus species.* Dibrugarh.

3. Padhy, Niranjan. *Structural and conformational studies on the radiation induced changes in complexed DNA and polynucleotides.* JNU.

4. Raghu, B. *Studies on the mechanisms of chemical modification of radiation damage in spores of Bacillus magaterium.* JNU.

5. Shiva Kumar, K. *Hormonal regulation of mitochondrial functions.* Madurai.

6. Thampatty, B. Padmakumari. *Structural aspects and functional studies of chloroplast membranes of barley.* JNU.

7. Uma Bai, V. *Development of chloroplast structure and function with reference to membrane proteins.* Madurai.

Marine Biology

1. Santha Devi, M.R. *Studies on the energy exchange in the Arabian sea.* CAST.

Botany

1. Brahama Prakash, G.P. *Relative persistence of pesticides in rice soil.* Utkal.

2. Jijiya Bai, J. *Mutation breeding in Phaseolus mungo L.* Osmania.

3. Krishna, Kodukula. *Morphogenetic studies on Mirabilis jalapa L.* Utkal.

4. Krishna Kumari, C. *Toxicological and microbiological studies on coconut products.* Osmania.

5. Kushwah, Lal Singh. *Studies on Fusarium indicum causing pigeonpea wilt.* JN Krishi.

6. Nageshwai, Gajula. *Chemotaxonomy of some caesalpiniaceae.* Osmania.

7. Nayak, Santosh Kumar. *Comparative studies on morphology and cytogenetics of Azolla sps.* Utkal.

8. Nizamuddin, Syed. *Embryological studies in some members of gramineae (Poaceae).* Bangalore.

9. Prakash, P. *Studies son some physiopathological aspects of fruit rot fungi.* Osmania.

10. Sokhi, Gunwant. *Development and histochemical studies on Turbinaria Canoides Kutzing (Fucales: Sargassaceae) from port Okha.* Delhi.

11. Srivastava, Alka. *Genetics of biological nitrogen fixation in Rhizobium-Cicer symbiosis.* PAU.

12. Sudhakar, Pillarisetti. *Studies on mutagen sensitivity of diploid and tetraploid petunias and cytogenetics of induced mutants.* Andhra.

Zoology

1. Bhattacharya, Meenakshi. *The problem of X inactivation in Gryllotalpa fossor Scudder.* Delhi.

2. Chandraguru, T. *Some biochemical aspects of the root-knot nematode problem in an economically important host plant.* Madurai.

3. Chourasia, Shiv Kumar. *Diet periodicity of zooplankton: Its composition and production.* HS Gour.

4. Eswar, Akunuri. *Ecology of an agamid garden lizard, Calotes versicolor Daudin.* Andhra.

5. Goswami, Naba Kumar. *Effects of disease and nutrition on the bionomics of ericulture industry in Assam valley, Districts of Kamrup and Goalpara.* Gauhati.

6. Hasan Syed Qamer. *Studies on some biochemical and physiological aspects of two cyclophyllidean cestodes of Canis familiaris.* Osmania.

7. Jain, Subodh Kumar. *Studies on oxygen consumption of adrenal of rat and its correlation to cholesterol and electrolyte concentration under the influence of amino acids.* HS Hour.

8. Jamuna, R. *Insecticidal factors from Bacillus sphaericus: Studies on the formation, characterization and field evaluation of the diocide.* Madurai.

9. Jetty, Jayshree. *Role of prolactin during sexual maturation and reproduction in the rat.* Hyderabad.

10. Kaushik, Uma Kant. *Ecological studies of three important rice hoppers, Nilaparvata lugons Stal, Sogatella furicifere Horv. and Nephotattix app in Chattiohgarh.* JN Krishi.

11. Mistry, Anahita. *Studies on the role of neuropeptides: Substance P and neurotensin in reproductive function in the female rat.* Hyderabad.

12. Purushothama, M.N. *Limnology of a lentic habitat with special reference to fisheries.* Bangalore.

13. Ratna Rao, Danduboyina. *Studies on limnological aspects of lake Kondakarla, Visakhapatnam with special reference to plankton and periphyton.* Andhra.

14. Sanjeev Kumar. *Taxonomy and zoogeography of the genus Tomosyaryalla (Diptera: Pipunculidae)* of India. PAU.

15. Singh, Ashok Kumar. *Patterns of relationships between certain plants and Spodoptera litura Fab (Lepidoptera: Noctuidae).* Delhi.

16. Tulasi, S.J. *In vivo effects of heavy metals on some aspects of physiology of fresh water field crab. Berytelphusa guerini.* Osmania.

17. Valli, S.K. *Zeitgeber interactions and circadian system in Funambulus plamarum.* Madurai.

18. Venkataraman, K. *Taxonomical and eco-physiological studies of mayflies, Epheroptera heptageniedae.* Madurai.

Medical Sciences

1. Bansal, Indu. *Studies on the in vivo potentiation of the action of drugs through chemical formulation for eradication of trophojeits of Entamoeba histolytica.* Kanpur.

2. Basu, Chandankumar. *Experimental studies of Vo2 max of athletes.* Calcutta.

3. Majumdar, Ramanath. *Metabolic studies in platelets and the nervous system.* Calcutta.

4. Premeela, T. *Protein and nucleic acid metabolism in eukaryotic cells: Studies on inabinding proteins of human placenta.* Madurai.

5. **Raju, Renuka.** *Pharmacokinetics of lithium : Studies in psychiatric patients.* Osmania.

6. **Rastogi, S.K.** *Physiological and histological studies on certain mammals exposed to pollutional effects of cotton dust.* Kanpur.

7. Ray, Amitkumar. *Role of monoamines on fibrinogen biosynthesis.* Calcutta.

8. Shrivastava, Suresh Chandra. *Toxicological studies of a pesticide endosulfan on reproductive organs in mammals.* Kanpur.

9. Sivaji, Yarlagadda. *Effect of disinfectants on bacterial resistance.* Delhi.

10. Sunita. *Purification and characterization of sperm membrane antigens for inducing autoimmunity of the tests.* PAU.

Agriculture

1. Anand Prakash. *Isolation, identification and evaluation of components from effective plant materials protecting stored paddy from insect pests.* Utkal.

2. **Babu Singh.** *Sodium hazard of bicarbonate irrigation waters as affected by leaching fraction and amendment application.* PAU.

3. Balyan, Dharam Vir Singh. *Response of cauliflower, variety snowball-16 to nitrogen, phosphorus and zinc.* HAU.

4. Bhatia, Bhim Sen. *A multivariate study of adoption of selected agricultural engineering technologies in the Punjab.* PAU.

5. Brij Lal. *Relative performance of hulled and hull less barleys in relation to fertility and irrigation.* CSAT.

6. Chapke, Vithal Gangaram. *Studies on the uptake of zinc by rice from contrasting soil types and its availability in soils with special reference to the influence of different zinc carriers and organic matters.* MP Agrl.

7. Chaudhary, Ajai Sen. *Effect of Plant growth regulators on loquat, Eriobotrya japonica Lindl.* CSAT.

8. Gaikwad Chandrakant Bhikoba. *Studies on cultutral practices and levels of irrigation on growth, yield end quality of irrigated cotton hybrid savitri and their after effects on growth and yield of gram var. PG-2.* MP Agrl.

9. Het Ram. *Genetics, stability and biochemical basis of stem borer resistance in forage sorghum, Sorghum bicolor (L) Moench.* HAU.

10. Janardan Prasad. *Influence of micronutrients, organic manures and pyrites on crop yield and micronutrients availability under multiple cropping systems in calcareous soil.* Rajendra Agrl.

11. Jhorar, Ladhu Ram. *Contribution of ground water towards evapotranspiration and its effect on the performance of wheat crop.* HAU.

12. Jitendra Kumar. *Stability and combining ability study for some metric traits related to productiviry in spring wheat. Triticum aestivum L.* CSAT.

13. Karanjkar, Shriram. *Supply response of paddy crop in Madhya Pradesh with special reference to technological change and uncertainty.* JN Krishi.

14. Khem Raj. *Studies on crop productivity in rice based rotations.* HP Krishi.

15. Ladaniya, Milind Shivratan. *Studies on the storage of perlette grapes as influenced by preharvest treatments, packaging and inpackage chemicals.* PAU.

16. Mahajan, Vijay. *Genetic analysis in maize, Zea mays L. for adaptation to diverse environments.* PAU.

17. **Mahakal, Keshav Ganpatrao.** *Studies on genotype environmental interactions on productivity and fruit quality in tomato.* PAU.

18. Mukteshwar Kumar. *Characterization and influence of fulvic acids on zinc transport and plant nutrition in calcareous soil.* Rajendra Agrl.

19. Nybe, E.V. *Investigations on the nutrition of black pepper. Piper nigrum L.* Kerala Agrl.

20. Sharma, Krishnaji. *To study the performance of suitable rose stock for Allahabad region.* Kanpur.

21. Sharma, Shyam Sunder. *Salt tolerance studies in garden annuals.* HAU.

22. Singh, Beant Bir. *Studies on variability, epidemiology and biology of Neovossia Indica Mitra Mundkur causing Karnal bunt of wheat.* PAU.

23. Singh, Jai Prakash. *Studies on fertilizer response to hulled and hulless barleys under irrigated condition.* CSAT.

24. Singh, Yadvendra Pratap. *Behaviour of new strains and their crosses for genetic parameters in spring wheat, Triticum aestivum L.* CSAT.

25. Triar, Lala Shashi Bhushan Prasad. *Evaluation of some insecticides against the insect pest complex of rice with special reference to green leaf hopper, Nephotettix virescens distant.* Rajendra Agrl.

26. Verma, Mithilesh Kumar. *Edaphic and plant factors influencing differential reaction of rice cultivars to zinc stress in calcareous soil.* Rajendra Agrl.

Veterinary Science

1. Aditya Kumar. *Effect of sex and weight on growth, feed efficiency and carcass quality of large white yorkshire pigs with different rations. CSAT.*

2. Agrawal, Anand Kishore. *Biochemistry of lymphoid organs of chickens during experimental encylostomiasis.* Ravishankar.

3. Agrawal, Ramji Das. *Studies on parasitic fauna of Zoo animals and wild life : Studies on the cercarial fauna of Mathura District with special reference to furcocercous (cercariae).* CSAT.

4. Garg, Mahesh Chander. *Studies on requirements of protein and energy for growth and lactation in beetal goats.* HP Krishi.

5. Ismaiel, Nadum Jalal. *Genetic evaluation of a crossbred dairy cattle population in tropical condition.* HAU.

6. Jalaudeen. A. *Dietary protein and energy requirements of* caged layers. Kerala Agrl.

7. Mathai, E. *Development and function of the ovary and the uterus in goats.* Kerala Agrl.

8. Namburi. Alaha Singari. *Some aspects of erythrocytic metabolism in relation to the pathogenesis of haemoglobinuria in buffaloes.* HAU.

9. Prahlad Singh *Nutritional evaluation of Leucaena leucocephala and effects of its utilization at different levels on rumen metabolism in cattle and buffaloes.* HAU.

10. Rahman, Taibur. *Studies on the prevalence and etiopathology of pneumonia in goats with special reference to mycoplasma and viral infections.* PAU.

11. Sahoo, Ghanashyam. *Effect of stockings density and flooring structures on the performance of broilers.* PAU.

12. Tiwari, Devendra Prasad. *Effect of feeding formaldehyde treated vegetable cake on intraruminal metabolism, nutrient utilization and growth in buffaloes.* HAU.

13. Verma, Shashi Bhushan. *Studies on two way family selection for egg production and its correlated responses to some unselected fitness traits in Tribolium castaneum.* Birsa Agrl.

CLASSIFIED ADVERTISEMENTS

JADAVPUR UNIVERSITY

CALCUTTA-700032

Employment Notification No. A2/C/13/86

The University invites applications in the prescribed form for the following posts :

1. Dean of Students—One post

Scale of Pay - Rs. 1500-60-1800-100-2000-125/2-2500/-

QUALIFICATIONS

Essential : (i) Uniformly good academic record with B + Master's Degree or its equivalent.

(ii) At least 10 years' experience as a teacher in academic institutions like University/ College or in an institute of higher learning or Govt. or Semi-Govt. organisations.

OR

At least 10 years' experience in academic institutions like University/ College or in an institute of higher learning or a Govt. or semi-Govt. research or training institute of which 5 years must be in high level administration.

(iii) Age not less than 40 years, relaxable in case of exceptionally qualified candidates.

Desirable: (i) A doctorate degree or published research work of merit.

(ii) A good background in administration and management in a senior position.

(iii) Knowledge in Behavioural Science.

(iv) Experience in Public Relations.

2. Director of Youth Welfare - One post

Scale of Pay : Rs. 1200-50-1300-60-1900/-

QUALIFICATIONS

Essential : (i) Uniformly good academic record with B + Master's degree or its equivalent.

(ii) At least 7 years' experience in a position involving supervision, administration of Colleges or in an institute of higher learning or a Govt./Semi-Govt. Organisation/ research institution or other academic bodies.

OR

At least 7 years' experience as a teacher in a college or in a University.

(iii) Age not less than 35 years, relaxable in case of exceptionally qualified candidates.

Desirable : (i) A doctorate degree of published papers of high standard.

(ii) Degree or Diploma in Social Welfare.

(iii) Experience in handling student activities or promotion of student welfare activities.

(iv) Proficiency in Extra-curricular activities of high standard.

3. Secretary to the Faculty Council for Postgraduate and Undergraduate Studies —3 posts.

(Faculty of Engineering and Technology —1 post;
Faculty of Arts —1 post
Faculty of Science —1 post)

Scale of Pay : Rs. 1200-50-1300-60-1900

QUALIFICATIONS

Essential : (i) Uniformly good academic record with B + Master's degree or its equivalent.

(ii) At least 7 years' experience in a position involving supervision, control and planning of examinations, administration of colleges or in an institute of higher learning or a Govt./Semi-Govt. organisation/ research institution or other academic bodies.

OR

At least 7 years' experience as a teacher in an college or in a University.

(iii) Age not less than 35 years, relaxable in case of exceptionally qualified candidates.

Desirable : (i) A doctorate degree or published papers of high standard.

(ii) Experience of conducting meetings of bodies.

LAST DATE OF RECEIVING APPLICATION IS SEPTEMBER 30, 1986.

Application forms are obtainable from the University Office during working hours on payment of Rs. 2/- or by post on payment of Rs. 3/- inclusive of postage. Higher initial salary may be given to really deserving candidate. No travelling allowance is admissible to candidates called for interview. Those who are in employment should submit their applications through proper channel. Choice of the Selection Committee will not necessarily be confined to applicants only. Canvassing in any form will disqualify a candidate.

REGISTRAR

INDIRA KALA SANGIT VISHWAVIDYALAYA

KHAIRAGARH (MP)

No. Dev./86 2607 Dated : Sept. 10, 1986

APPLICATIONS together with the application fee of Rs. 7/- are invited for the following post of Accompanists in the University Teaching Departments : (1) Mridangam Player for Bharatnatyam, (2) Lok Sangeet Sangatkar. Scale of pay Rs. 740-1180 (in Chaudhary Pay scale). Qualifications : (1) **Mridangam Player** : Possession of Higher Secondary School Certificate with Vid of the University or an equivalent examination. **Desirable** : Proved proficiency in playing Mridangam. (2) **Lok Sangeet Sangatkar** : Higher Secondary with knowledge of Folk Dances and Folk Music of Madhya Pradesh. **Desirable** : Candidates must possess knowledge of playing Folk Instruments.

Qualifications may be relaxed in the case of persons who are found otherwise very good.

Prescribed Forms obtainable by sending self-addressed stamped envelope of Rs. 1.70. No. TA and DA payable for nterview. Last date for receipt of application is **4th October, 1986.** Those who have already applied in response to our advertisement dated 25-6-1986 for the post of Tabla Folk Dance need not apply again.

M.K. Gangajaliwale
REGISTRAR

UNIVERSITY OF ROORKEE

ROORKEE

No. Advt. Estt (A)/4/A-86(Advt.)

Dated : September 1, 1986

Application on prescribed forms, obtainable from the Registrar, either personally or by sending self-addressed envelop (9"x4") affixed with Rs. 1.20 stamps for the post of University Medical Superintendent in the University Health Centre in the pay scale of Rs. 1200-50--1300-60-1660-EB-60-1900-75-2050 and other allowances and facilities as per University rules. Normally, the applicants should not be above 55 years of age. Candidates in employment are required to send their applications through proper channel. Last date of receipt of application on prescribed form alongwith fee of Rs. 10/- (by Bank Draft or Indian Postal Order in favour of Registrar, University of Roorkee) is **Oct. 6th, 1986.**

QUALIFICATIONS

Essential

M.B.B.S. from a recognised University/Institution with atleast 10 years experience of working in Govt./Private Hospital of rupute.

Desirable

M.D./M.S./M.R.C.P./F.R.C.S. from a recognised University/Institution.

NOTE

1. Doctors in Govt. or Public Sector Hospitals, if selected may be offered deputation terms subject to concurrence of their parent Deptt.

2. Higher start in the grade may be offered depending upon qualifications and experience.

REGISTRAR

UCHCHA SIKSHA AUR SHODH SANSTHAN POST GRADUATE AND RESEARCH COMPLEX DAKSHINA BHARAT HINDI PRACHAR SABHA

APPLICATIONS ARE INVITED ON THE PRESCRIBED FORM FOR THE FOLLOWING POST ON OR BEFORE **15th of October, 1986** on the following Address : Registrar, Post Graduate and Research Complex, Dakshina Bharat Hindi Prachar Sabha, P.B. No. 82, Khairatabad, Hyderabad-500 004.

PROFESSOR OF HINDI : (One for Madras P.G. Department)

Scale of Pay : Rs. 1500-2500+Usual allowances. For the deserving candidate higher start may also be considered.

QUALIFICATIONS : An eminent Scholar with published work of high quality, actively engaged in Research in Hindi Literature. Ten years experience of Teaching and Research experience of guiding research of Doctoral Level.

OR

An outstanding Scholar with established reputation who has made significant contribution to knowledge.

Applications can be had from the Registrar by sending postal orders of Rs. 5/- with 25×13 cms self address cover.

REGISTRAR

JADAVPUR UNIVERSITY

CULCUTTA-700032

Employment Notification No. A2/C/14 86.

Dated : 5th September, 1986.

The University invites applications in the prescribed form for the following posts :

1. Reader in International Relations —One post

Scale of Pay: Rs. 1200-50-1300-60-1900/-

QUALIFICATIONS

Essential : Good academic record, with a doctoral degree or equivalent published work in Political Science/History/Economics/International Relations. Evidence of being actively engaged in (i) research or (ii) innovation in teaching methods or (iii) production of teaching materials.

About five years' experience of teaching and/or research provided that at least three of these years were as Lecturer or in an equivalent position.

This condition may be relaxed in the case of candidate with outstanding record of teaching/research.

Specialisation : Politics and History of South East Asia.

Desirable : The selected candidate is also expected to be able to teach courses which are not, exclusively, related to South East Asia.

2. Lecturer in International Relations —One post

Scale of Pay: Rs.700-40-1100-50-1600/-

QUALIFICATIONS

Essential: (a) A Doctor's degree or research work of an equally high standard; and

(b) Good academic record with at least second class Master's degree in Political Science/History/Economics/International Relations from an Indian University or an equivalent degree from a foreign University.

Having regard to the need for developing interdisciplinary programmes, the degrees in (a) and (b) above may be in relevant subjects.

Provided that if the selection committee is of the view that the research work of a candidate as evident either from his thesis or from his published work is of very high standard, it may relax any of qualifications prescribed in (b) above.

Provided futher that if a candidate possessing a Doctor's degree or equivalent research work is not available or is not considered suitable, a person possessing a good academic record, (weightage being given to M.Phil or equivalent degree or research work of quality) may be appointed provided he has done research work for at least two years on the condition that he/she will have to obtain a Doctor's degree or give evidence of research of high standard within eight years of his appointment, failing which he will not be able to earn future increment until he fulfils these requirements.

FOR BOTH THE POSTS

Explanation : For determining 'Good academic record' the following criteria shall be adopted :

(i) A candidate holding a Ph.D. degree should possess at least a second class Master's degree; or

(ii) A candidate without a Ph.D. degree should possess a high second class Master's degree and second class in the Bachelor's degree: or

(iii) A candidate not possessing Ph.D. degree but possessing second class Master's degree should have obtained first class in the Bachelor's degree.

Desirable : Ability to teach courses on International Law and Organisation.

FOR LECTURER POST

Persons having secured marks more than the mid point of the prescribed minimum marks for passing an examination in the second division and the prescribed minimum marks for passing an examination in the first division by a University shall be deemed to have passed that examination in the high second class.

LAST DATE OF RECEIVING APPLICATION IS OCTOBER 6, 1986.

Application forms are obtainable from the University Office during working hours on payment of Rs. 2/- or by post on payment of Rs. 3/- inclusive of postage. Higher initial salary may be given to really deserving candidate. Those who are in employment should submit their applications through proper channel. Choice of Selection Committee will not necessarily be confined to applicants only. Canvassing in any form will disqualify a candidate.

REGISTRAR

GOA UNIVERSITY

Bambolim, Goa-403 005.

Applications for the post of a Professor, two Readers and three lecturers in the Department of Computer Science and Technology in the prescribed form (8 copies) available from the office of the Registrar on payment of Rs. 10.00 by a Demand Draft drawn in favour of the Registrar, Goa University and payable at the State Bank of India, Bambolim, Goa-403 005 are invited so as to reach this office not later than **17th November. 1986** for inland candidates and 1st December, 1986 from candidates abroad. Prescribed forms of application can be had in person free of charge from the Registrar's Office.

The scales of pay will be as prescribed by the University Grants Commission for the relevant post. The posts also carry allowances admissible to Central Government employees. A higher starting pay may be considered for exceptionally qualified person.

The details regarding educational qualifications required for these posts can be had from the office of the Registrar alongwith the prescribed forms.

Dr. S.K. Gandhe
REGISTRAR

ASSOCIATION OF INDIAN UNIVERSITIES

AIU House, 16 Kotla Marg, New Delhi-110002

Applications from Indian citizens are invited for the following posts in the prescribed forms available on payment of Rs. 2/- from the office of the Association.

1. **Dy. Secretary (Admn.) : Scale of Pay Rs. 1500-2000 : One**

Post Graduate with 1st class or high second class degree with at least ten years experience in an administrative post at executive level in University, Government Department/Autonomous Organisation. Persons having Diploma/Degree in Personnel Management and knowledge of administrative rules and understanding of issues in university system will be preferred.

2. **Research Officer : Scale of Pay Rs. 1100-1600 : One**

Essential : A first class postgraduate in Sciences, Mathematics or Statistics with at least five years experience of research in the area of examinations in Colleges/Universities.

Desirable : Good knowledge of computer applications with experience in computerisation of examination work.

3. ***Section Officer : Scale of Pay Rs. 700-1300 : One***

Graduate with at least seven years experience as sales executive in a publishing house of repute. Candidates having Master's Degree,Diploma in Sales Management/Publishing/Personnel Management and knowledge of accounts will be preferred.

Persons already working in Universities/Colleges can be considered for deputation terms.

All posts carry dearness and other allowances generally at the Central Govt. rates. Relaxation in any of the requirements may be made in exceptional cases. The Association reserves the right not to fill up any of the vacancies advertised if the circumstances so warrant. SC/ST/Ex-servicemen will be given preference. Canvassing in any form by or on behalf of a candidate will be a disqualification.

Applications complete in all respects should reach the office by **30th September 1986**. Persons already in service may apply through proper channel. Applications received after the last date or without complete information may not be entertained.

UNIVERSITY OF GORAKHPUR

GORAKHPUR

No. 898/Gen.(Adm.)/86 Dated: 10-9-1986

ADVERTISEMENT No. 9

THE UNIVERSITY REQUIRES

(A) Permanent Professor : One each in Sanskrit, Hindi, History and Chemistry.

(B) Temporary Professor : One in Sociology (Leave Vcancy).

(C) Permanent Readers : One each in History, Political Science, Sanskrit and Military Science.

(D) Permanent Lecturers : One each in Political Science, History, Hindi Economics, French, English, Fine Arts (Applied Arts), Commerce and three in Education.

(E) Temporary Lecutrers : One each in Statistics, Mathematics, Zoology; and one each in Sociology, English and Commerce (Leave Vcancy) and two each in Physics and Geography (One each in Leave Vacancy).

(F) Permanent Instructor Arts & Craft. : One in Education Department.

Pay Scale

For Professors : Rs. 1500-60-1800-100-2000-125 2-2500

For Readers : Rs. 1200-50-1300-60-1900.

For Lecturers : Rs. 700-40-1100-50-1600.

For Instructuor Arts & Craft. : Rs. 625-30-835-E.B.-30-925-35-1065-E.B.-35-1240.

Plus D.A. according to rules.

QUALIFICATIONS AND REQUIREMENTS

FOR PROFESSORS

Either

Eminent scholar with published work of high quality and active engagements in research and ten years experience of teaching or research and experience of guiding research at doctorate level;

OR

Outstanding Scholar with established reputation for significant contribution to knowledge.

FOR READERS

In the case of Faculty of Arts and Science :

(i) Good academic record with a doctorate degree or equivalent published work, and active engagement in research or innovation in teaching methods or production of teaching materials;

(ii) Five years experience of teaching or research including at least three years as lecturer or in an equivalent position;

Provided that the requirement contained in sub-clause (ii) may be relaxed in the case of a candidate who in the opinion of the Selection Committee, has outstanding research work to his credit.

FOR LECTURERS

(1) In the case of Faculty of Arts (Except the Department of Fine Arts), and the Faculties of Science and Commerce :

(a) a doctorate degree or research work of an equally high standard in a relevant subject; and

(b) consistently good academic record with first or high second class Master's degree, or an equivalent degree of a foreign University in a relevant subject;

(2) In the case of the Department of Fine Arts in the Facutly of Arts :

Either

(a) consistently good academic record with first or high second class Master's degree, or an equivalent degree or Diploma recognised by the University; and

(b) two years research or professional experience or creative work and achievement in his field of specialisation or a combined research and professional experience of three years in the field as an artist of outstanding talent.

OR

a traditional or a professional artist with highly commendable professionable achievement in the subject concerned.

(3) In the case of the Faculty of Education :

Either

(a) a doctorate degree in Education or research work of an equally high standard; and

(b) consistently good academic record with first or high second class Master's degree, or an equivalent degree of a foreign University in a relevant subject.

OR

(a) a doctorate degree in any University discipline or research work of an equally high standard; and

(b) consistently good academic record with an M.Phil. degree in Education (which may be acquired while in service) or an equivalent degree of a foreign University.

(4) If the Selection Committee is of the view that the research work of a candidate as evident either from his thesis or from his published work is of very high standard, it may relax any of the qualifications prescribed in sub clause (b) of clause (1), or sub clause (b) of clause (3), as the case may be.

(5) Where in cases referred to in clause (1) and (3) no candidate possessing doctorate degree or equivalent research work is available or is considered suitable, a person possessing a consistently good academic record (weightage being given to M.Phil or equivalent

degree or research work of quality may be appointed provided he has done research work for at least two years or has practical experience in a research laboratory or organisation, on the condition that he obtains a doctorate or gives evidence of research work of equivalent high standard within five years of his appointment, failing which he shall not be able to earn future increments until he fulfils the requirements.

EXPLANATION

(a) marks above the mid-point between the minimum percentage of marks fixed by the University for award of first and second division are said to be high second class marks;

(b) a candidate for lecturership in the faculty of Education, having obtained either an average of 55 percent marks in the two examinations prior to Master's degree, that is to say Intermediate and Bachelor's degree examinations, as also in the examination for B.Ed. (irrespective of the marks obtained in any of the three examinations), or 50 percent marks in each of the three examinations separately is said to have a consistently good academic record.

(c) a candidate (other than a candidate for lecturership in the faculty of Education) having obtained either an average of 55 percent marks in the two examinations prior to Master's degree that is to say Intermediate and Bachelor's degree examinations (irrespective of the marks obtained in any of the two examinations), or 50 percent marks in each of the two examinations separately, is said to have a consistently good academic record.

(d) a candidate (other than a candidate for lecturership in the Faculty of Education) having obtained either an average of 55 percent marks in the two examinations prior to Master's degree that is to say Intermediate and Bachelor's degree examinations (irrespective of the marks obtained in any of the two examinations), or 50 percent marks in each of the two examinations separately, is said to have consistently good academic record.

FOR INSTRUCTOR ARTS AND CRAFT

M.Ed. degree and degree or diploma in Arts and Craft.

OTHER CONDITIONS FOR PERMANENT POSTS ONLY

(a) The period of probation shall be one year.

(b) The incumbent, shall get the benefit of general provident fund (G.P.F./Pension) as per rules.

(c) The age of superannuation shall be as per rules.

Applications on the prescribed form (8 copies) available from the Office of the Registrar on payment of Rs. 10/- for the post of Professor /Reader and Rs. 5/- for the post of lecturer/Instructor as registration fee in cash or by Post. Order drawn in in favour of the Registrar, University of Gorakhpur, are invited so as to reach this office through the employer, if employed, not later than **October 15, 1986.**

Those applicants who had applied before 30th June, 1985, may apply again if desire. Likewise applicants for the post of Professor in Chemistry and Lecturer in French should also apply again, if desire.

The candidates shall be required to appear for interview if called, at their own expense. The Selection Committee may recommend higher initial salary to a person specially qualified for the above posts. It will be open to the University not to fill-up any post advertised.

Canvassing in any form by or on behalf of the candidate will disqualify him.

B. Singh
REGISTRAR

INDIAN INSTITUTE OF TECHNOLOGY

BOMBAY

Advertisement No. C-79/86

Applications in the prescribed form, obtainable on request from the Registrar, Indian Institute of Technology, P.O. IIT Powai, Bombay-400 076 and accompanied by a self addressed envelope (25cm x 10cm) are invited for the following post on or before **16th October, 1986.** Candidates employed in Government, Semi-Government Organizations or Educational Institutions must apply through proper channels. Relaxation of standard for SC/ST candidates exists as per Govt. of India rules.

POST : **DEPUTY REGISTRAR (ACADEMIC)**

(Reserved for SC/ST candidate). In case no SC/ST candidate is found suitable, candidates from general category will be considered.

Scale of Pay : Rs. 1200-50-1300-60-1900.

(Total gross emoluments on the minimum of the scale - Rs. 3075.35).

JOB DESCRIPTION

The Deputy Registrar (Academic) works under the control of the Dean of Academic Programmes and the Registrar. He is responsible for all matters concerning the planning and organisation of examinations the maintenance of student academic records, award of scholarship, maintenance of Senate records and implementation of Senate decisions, organisation of the Annual Convocation etc. The job requires familiarity with academic rules and regulations.

QUALIFICATIONS

1. A good Bachelor's degree in Arts, Science, Commerce, Engineering or Technology of a recognised University.

2. A post-graduate Degree or Diploma in any of the above fields or in Public Administration Management of a recognised Institute University or its equivalent; or recognised qualifications as Chartered Cost SAS Accountant.

EXPERIENCE

A minimum of 10 years of relevant administrative experience preferably in a Government, Educational or Research Institute or in a commercial organisation of a national standing. Out of this, at least 5 years should be in a responsible position. The candidates would be expected to have some familiarity with academic activities and working procedures in higher educational institutions.

DESIRABLE

1. Teaching and Research experience or experience of life on a residential educational campus.

2. Experience of computer systems for information processing and retrieval.

In case of candidates with exceptional qualifications, the duration of experience may be relaxed suitably.

REGISTRAR

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